

## CLAIMS:

1. A method for reducing bus traversal in a media server comprising a host processor, a network interface, and a storage subsystem comprising one or more storage devices, the host processor and network interface being connected to a first input-output bus, the storage subsystem being connected to a second input-output bus, the first and second input-output buses being connected via a controller, the method comprising:

providing an adaptable cache connected to the first input-output bus, said adaptable cache comprising a data interface, core logic, and electronic storage media;

receiving a request for a media asset via a network, said request being received by the network interface;

receiving the request at the adaptable cache;

processing the request by the adaptable cache, wherein if the requested media asset is found on the electronic storage media, the media asset is returned to the user via the first bus and not the second bus, and wherein if the requested media asset is not found on the electronic storage media, the media asset is accessed from the storage subsystem and returned to the user via the second bus and first bus.

2. The method of claim 1, wherein the request is received at the adaptable cache via the host processor.

3. The method of claim 1, wherein the request is received at the adaptable cache directly from the network interface.

4. The method of claim 1, wherein the adaptable cache is integrated with the network interface.

5. The method of claim 1, wherein the adaptable cache is integrated in the controller.

6. The method of claim 1, wherein the adaptable cache monitors requests for media assets and if it is determined that the media asset should be cached, the media asset is transferred from one or more storage devices to the electronic storage media.

7. The method of claim 6, wherein the adaptable cache monitors requests for media assets and if it is determined that the media should be cached, the adaptable cache notifies requesting applications that it can accept future requests for said media assets.

8. The method of claim 6, wherein the adaptable cache monitors requests for media assets and if it is determined that the media should be cached, the adaptable cache notifies the storage subsystem to disregard requests to deliver the media.

9. The method of claim 1, wherein if the requested media asset is not found on the electronic storage media, the adaptable cache stores the requested media asset on the electronic storage media.

10. The method of claim 1, wherein the adaptable cache integrates into the media server via an expansion card slot.

11. The method of claim 1, wherein the adaptable cache integrates with native communications busses and protocols existing on the media server.

12. The method of claim 1, wherein the adaptable cache utilizes the busses and protocols existing on the media server.

13. A method for improving transactional performance in a media server comprising a host processor, a network interface, and a storage subsystem comprising one or more storage devices, the host processor and network interface being connected to a first input-output bus, the storage subsystem being connected to a second input-output bus, the first and second input-output buses being connected via a controller, the method comprising:  
providing an adaptable cache connected to the second input-output bus, said adaptable cache comprising a data interface, a core logic, and electronic storage media, and enabled to:  
dynamically accept algorithms and heuristics that define or alter its operating characteristics without disrupting the operation of the media server,  
determine whether to retrieve and store data from the storage subsystem based on the algorithms and/or heuristics;  
alter the storage size of the electronic storage media without disrupting the operation of the media server,

retrieve data from the storage subsystem using its own data interface;  
receiving a request for a media asset via a network, said request being received by the network interface;

receiving the request at the adaptable cache;

5        processing the request by the adaptable cache, wherein if the requested media asset is found on the electronic storage media, the media asset is returned to the user without accessing the one or more storage devices on the storage subsystem, and wherein if the requested media asset is not found on the electronic storage media, the media asset is accessed from one or more storage devices on the storage subsystem and returned to the user.

10        14. The method of claim 13, wherein the request is received at the adaptable cache via the second input-output bus.

15        15. The method of claim 13, wherein the adaptable cache integrates into the media server via an expansion card slot.

16. The method of claim 13, wherein if the requested media asset is not found on the electronic storage media, the adaptable cache stores the requested media asset on the electronic storage media.

20        17. The method of claim 13, wherein the adaptable cache monitors requests for media assets and if it is determined that the media asset should be cached, the media asset is transferred from one or more storage devices to the electronic storage media.

25        18. The method of claim 17, wherein the adaptable cache monitors requests for media assets and if it is determined that the media should be cached, the adaptable cache notifies requesting applications that it can accept future requests for said media assets.

30        19. The method of claim 17, wherein the adaptable cache monitors requests for media assets and if it is determined that the media should be cached, the adaptable cache notifies the storage subsystem to disregard requests to deliver the media.

20. The method of claim 13, wherein the adaptable cache integrates with native communications busses and protocols existing on the media server.

21. The method of claim 13, wherein the adaptable cache utilizes the busses and protocols existing on the media server.

5 22. A system for facilitating delivery of media resources, comprising:

media server comprising a host processor, a network interface, and a storage subsystem comprising one or more storage devices, the host processor and network interface being connected to a first input-output bus, the storage subsystem being connected to a second input-output bus, the first and second input-output buses being connected via a controller,

10 an adaptable cache connected to an input-output bus comprising a data interface, core logic, and electronic storage media, the adaptable cache being adapted to store data on the electronic storage media, and further being adapted to receive and process requests for media assets, wherein if the requested media asset is found on the electronic storage media, the media asset is returned to a requestor via one or more I/O buses, and wherein  
15 if the requested media asset is not found on the electronic storage media, the media asset is accessed from the storage subsystem and returned to the requestor.

23. A method for simulating passive monitoring of a bus by a first component, comprising:

20 identifying a second component that transmits messages to a third component, said messages desired to be monitored by the first component; and

adapting the second component to address the message to both the third component and the first component.